

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF VIRGINIA  
ALEXANDRIA DIVISION

TOUCHCOM, INC. AND TOUCHCOM  
TECHNOLOGIES, INC.,

Plaintiffs,

- against -

BERESKIN & PARR AND  
H. SAMUEL FROST,

Defendants.

No. 1:07-cv-00114-JCC-TCB

## PLAINTIFFS' PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

## **TABLE OF CONTENTS**

I.	INTRODUCTION .....	1
II.	PROPOSED FINDINGS OF FACT .....	3
A.	Background.....	3
B.	The '282 Patent.....	4
C.	Infringement By The Dual-Display System Under The Doctrine Of Equivalents.....	8
D.	Defendants' Ensnarement Defense And The Hypothetical Claims.....	8
E.	The Prior Art References Cited By Dr. Grimes Do Not Disclose The Required Task Means Or Concurrent Operation Of Those Task Means.....	12
1.	U.S. Patent No. 4,630,754 (Komukai) Lacks Multiple Elements Of The Hypothetical Claims .....	12
2.	U.S. Patent No. 3,931,497 (Gentile) Lacks Multiple Elements Of The Hypothetical Claims.....	16
3.	The ARCO II System.....	19
a)	The ARCO II System Is Not Prior Art .....	19
b)	The ARCO II System Lacks Multiple Elements Of The Hypothetical Claims.....	21
4.	U.S. Patent No. 4,107,777 (Pearson) Lacks Multiple Elements Of The Hypothetical Claims.....	23
5.	U.S. Patent Nos. 4,395,627 (Barker), and 4,199,100 (Wostl) Lack Multiple Elements Of The Hypothetical Claims .....	27
6.	Any Prior Art Allegedly Disclosed In The '282 Patent Lacks Multiple Elements Of The Hypothetical Claims .....	30
F.	Summary Of Missing Claim Limitations In The Prior Art.....	31
III.	PROPOSED CONCLUSIONS OF LAW.....	33
A.	Background Legal Principles.....	33
1.	Defendants Have Asserted Ensnarement In The Context Of Summary Judgment .....	33
2.	Patent Infringement and the Doctrine of Equivalents.....	34

3.	Ensnarement Is A Defense To Infringement Under The Doctrine Of Equivalents.....	35
4.	The Present Findings Only Concern Whether Plaintiffs May Assert Infringement Under The Doctrine Of Equivalents By The Dual-Display System .....	38
B.	The Hypothetical Claims Are Not Ensnared By The Prior Art .....	40
1.	Defendants Have Not Met Their Burden To Produce Evidence Of Prior Art .....	41
2.	ARCO II Does Not Qualify As A “Prior Art” Reference .....	43
3.	The Hypothetical Claims Do Not Ensnare the Prior Art Because The Prior Art Lacks Multiple Claim Limitations.....	47
a)	The Hypothetical Claims Include Dual Displays, As Well As Task Means That Run Concurrently .....	48
b)	None Of the Prior Art Patents Asserted By The Defendants, Alone or in Combination, Includes The Three Recited Task Means Running Concurrently, And Accordingly The Hypothetical Claims Do Not Ensnare The Prior Art .....	49
C.	Conclusion .....	51
	APPENDIX A (Komukai) .....	52
	APPENDIX B (ARCO II).....	54

Pursuant to the Court's September 14, 2010 Order (Docket Index ("D.I.") 176), Plaintiffs Touchcom, Inc. and Touchcom Technologies, Inc. (collectively, "Touchcom"), submit these Proposed Findings of Fact and Conclusions of Law in connection with the ensnarement hearing scheduled for November 22, 2010.<sup>1</sup>

## **I. INTRODUCTION**

This action concerns Touchcom's U.S. Patent 5,027,282 ("the '282 patent"), entitled "Interactive Pump System." The '282 patent is generally directed to an interactive fuel-dispenser system. As part of the "trial within a trial" portion of this malpractice action against Defendants, Touchcom has asserted that various fuel dispensing systems infringe the claims of the '282 patent, both literally and under the doctrine of equivalents.

The system claimed in the '282 patent contains, among other things, a display for transaction data and user instructions. Touchcom has asserted that the accused fuel dispensing systems contain a Card Activated Terminal ("CAT") that displays transaction data and user instructions and thus literally meets the display element of the claimed system. The accused systems also contain an additional display, separate from the CAT display, which Touchcom contends also displays transaction data. As an alternate theory of infringement, Touchcom has asserted that such "dual-display" systems are equivalent to a single display system, and accordingly the accused fueling systems infringe the '282 patent claims under the doctrine of equivalents.

At issue here is Defendants' "ensnarement defense" to Touchcom's doctrine of equivalents theory of infringement regarding the "dual-display" systems: that is, Defendants'

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<sup>1</sup> In support, Touchcom also submits herewith the Declaration of David Beazley, dated November 18, 2010 ("Beazley Decl.") and the Second Declaration of Stefan Stoyanov, dated November 18, 2010, and accompanying exhibits ("Second Stoyanov Decl.").

claim that the dual-display systems cannot infringe under the doctrine of equivalents because such systems would be “ensnared” by the prior art. Under Federal Circuit case law, ensnarement is a defense to infringement under the doctrine of equivalents, and applies if a “hypothetical claim” that would literally cover the accused systems would impermissibly “ensnare,” or encompass, the prior art. Defendants have not raised an ensnarement defense regarding any doctrine of equivalents issues other than the dual-display issue.

As discussed in detail in Parts II.E-F *infra*, the prior art references cited by Defendants’ expert do not disclose numerous limitations of the relevant hypothetical claims. Indeed, during prosecution of the ’282 patent, Defendants specifically argued and obtained allowance of the patent on the basis that one of these references—U.S. Patent No. 4,630,754 (Komukai)—did not disclose the “task means running concurrently” limitation required by the ’282 patent and the applicable hypothetical claims. Since all of the references cited by Defendants, like Komukai, fail to disclose this limitation (among many other missing limitations), Defendants’ ensnarement defense must fail. *See* Part III.B.3, *infra*. Defendants’ ensnarement argument also fails because Defendants have not met their burden to produce evidence of prior art (Part III.B.1 *infra*). Finally, Defendants have not been able to show that one of the asserted instances of prior art — the so-called “ARCO II” reference—even qualifies as prior art (Part III.B.2 *infra*).

It is important to recognize the metes and bounds of the ensnarement issue before the Court. The sole issue is whether, and only whether, Touchcom is entitled to assert infringement under the doctrine of equivalents on the basis that a “dual-display” system is equivalent to the claimed system. The issues of (1) the validity of the claims of the ’282 patent-in-suit, (2) the literal infringement of the asserted claims of the ’282 patent-in-suit, and (3) the infringement of the asserted claims of the ’282 patent-in-suit under any doctrine of equivalents theory other than

the “dual-display” theory, are not before the Court, on summary judgment or otherwise. *See* Part III.A.4 *infra*.

## **II. PROPOSED FINDINGS OF FACT**

### **A. Background**

1. U.S. Patent 5,027,282 (“the ’282 patent”) entitled “Interactive Pump System,” issued on June 25, 1991, and claims priority to an application filed August 6, 1987. D.I. 168-2. Claims 1-3 of the ’282 patent are at issue in this case. The system claimed in the ’282 patent contains, among other things, a display for transaction data and user instructions.

2. Touchcom has accused various systems consisting of Dresser fuel dispensers and Card (or Customer) Activated Terminals (“CATs”) connected to Point of Sale (“POS”) computer systems (either a Dresser Nucleus or a VeriFone Ruby/Sapphire/Topaz POS) (“Accused Systems”) of literally infringing the claims of the ’282 patent.

3. Touchcom has also asserted that the accused systems infringe under the doctrine of equivalents. The specific allegation at issue here is Touchcom’s claim that the Accused Systems, which, in addition to the CAT display, contain a display for a fuel sale price, volume, or both (“sales display”), infringe the patent claims under the doctrine of equivalents, because the use of two separate displays—sales display and CAT display (a “dual display”)—is equivalent to the use of a single display for displaying all information.

4. On August 11, 2010, Defendants filed a motion for summary judgment. Def. Sum. Jud. Br., Aug. 11, 2010 (D.I. 150). As part of that motion Defendants seek, *inter alia*, an order precluding Touchcom from asserting equivalence of a dual-display system to a single display system because the dual-display system allegedly “ensnares” the prior art. *Id.*

at 18-21. Defendants did not seek to limit any other application of the doctrine of equivalents asserted in Plaintiffs' expert reports, as being ensnared by the prior art.

**B. The '282 Patent**

5. The '282 patent is generally directed to an interactive pump system that can be used, by way of example, at a typical gas station. *See* '282 patent, title page, col. 1341:21-48 (claim 1), D.I. 168-2. The claimed system generally comprises of hardware including a pump (or "fuel dispenser"), a display and an input device, and a central processing unit ("CPU"). *Id.* at col. 1:43-56; 4:10-14, 1341:23-38. A monitor in the display and input device can display transaction data and instructions to the user. *Id.* at col. 2:62-65, col. 1341:25-38.

6. The claimed system also contains various software "tasks" that run concurrently with each other on the CPU. *Id.* at 1341:39-48. Those tasks include a pump task for controlling the pump, a display and input task for controlling the display and input device, and an application task which coordinates between multiple tasks. *Id.*, at Fig. 13, col 1:60-65. The '282 patent includes 16 claims.

7. The tasks of the '282 patent are illustrated by Figure 13 of the patent, as shown below:

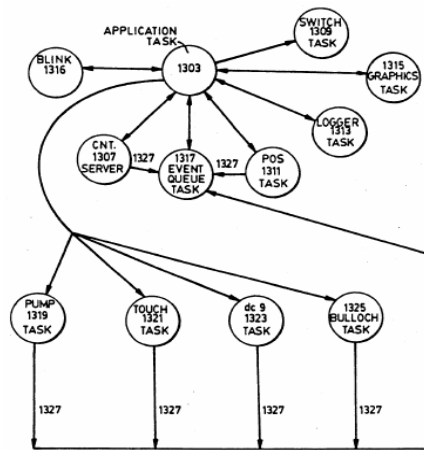


FIG. 13

8. During the international phase of the prosecution of the application that eventually issued as the '282 patent, Defendants, who prosecuted the patent, argued that one of the prior references relied on by Defendants here —U.S. Patent No. 4,630,754 (Komukai)—did not disclose or suggest concurrent operation of the software tasks, and that the claims therefore were patentable. Second Stoyanov Decl. Ex. A at TCVA 00004156-57 (Petition to Make Special). This position was adopted by the Examiner, the claims were allowed and the '282 patent was issued. *See* Second Stoyanov Decl. Ex. A, at TCVA00004165 and TCVA 00004140; *see also* para. 25 *infra*.

9. In this action, the Court held a claim construction hearing on July 28, 2010, and issued a claim construction ruling on August 11, 2010. Memorandum Opinion (D.I. 153), Order (D.I. 154). During the claim construction briefing process, the parties agreed upon the constructions of several claim terms, as shown in the following table:

Claim Term	Agreed-Upon Construction
central processing unit	No construction necessary; plain meaning.
running concurrently	Executing multiple tasks at the same time in a single central processing unit
task	A software module separately controlled by a multitasking operating system



transaction data	information about an ongoing or completed transaction
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*See* Touchcom’s Opening Claim Construction Brief (“Touchcom’s Markman Br.”), Ex. C, June 25, 2010 (D.I. 134-3).

10. The Court also construed the “task means” claim elements (the pump task means, display and input task means, and application task means) in accordance with Touchcom’s undisputed proposed constructions, to have structures as shown in the following tables.

Order at 1 (D.I. 154); Touchcom’s Markman Br., 25-30 (D.I. 134); Defendants’ July 26, 2010 Letter to the Court (D.I. 147).<sup>2</sup>

Construction Of Pump Task Means		
Claim	Function	Corresponding Structure
cl. 1	“control the pump means”	an algorithm (and equivalents) that selects a pump command code, creates a control message that includes the command code, and writes the control message on the connection between the CPU and the pump.
cl. 2	“process the pump directions and transfer pump commands to, and receive pump responses from, the pump means”	an algorithm (and equivalents) that inspects the pump direction to select a procedure to execute and then, in the chosen procedure, selects a pump command code, creates a control message that includes the command code, writes the control message on the connection between the CPU and the pump, and reads the pump response on the connection between the CPU and the pump.
cl. 3	“process the pump responses and transfer resultant pump requests to the application task means”	an algorithm (and equivalents) that inspects the pump response data, creates a pump event message, and transfers the message to an event queue for later use by the application task.

<sup>2</sup> Because the “task means” elements are “means plus function” limitations, each of the task means elements was construed as the particular structure or its equivalent corresponding to the function set forth in the claim. *See* 35 U.S.C. § 112, paragraph 6. Because each of claims 1-3 sets forth different functions for the individual task means, the relevant structures for each claim also differ.

<b>Construction Of Display and Input Task Means</b>		
Claim	Function	Corresponding Structure
cl. 1	“control the display and input means”	an algorithm (and equivalents) that selects a display and input means command code, creates a control message that contains the command code, and writes the control message on the connection between the CPU and the display and input means alternate: an algorithm (and equivalents) that identifies data to be shown, and executes an operation to have the data transferred to the display and input means
cl. 2	“transfer displays and input commands to, and receive display responses and input responses from, the display and input means, process the display and input responses, and transfer resultant display and input requests to the application task means”	<p>“<u>transfer</u>”: an algorithm (and equivalents) that inspects the command type and selects a procedure to execute, within the selected procedure selects a display and input means command code, creates a control message that contains the command code, and writes the control message on the connection between the CPU and the display and input means.</p> <p>“<u>receive</u>,” “<u>process</u>,” and “<u>transfer</u>”: an algorithm (and equivalents) that reads response data from the display and input means, inspects the response, creates an event message, and transfers the message to an event queue for later use by the application task.</p>
cl. 3	“process the display and input directions.”	an algorithm (and equivalents) that inspects the type of the incoming message, picks a procedure to execute, and then selects a display and input means command code

<b>Construction Of Application Task Means</b>		
Claim	Function	Corresponding Structure
cl. 1	“receive and process the input responses and transfer the results into pump directions to the pump task means.”	an algorithm (and equivalents) that waits for a user input, receives and inspects an input response, validates the sale, creates a pump direction message, and sends the message to the pump task means
cl. 2	“process the display and input requests and transfer resultant pump directions to the pump task means.”	an algorithm (and equivalents) that inspects the received display and input request, validates the sale, creates a pump direction message, and sends the message to the pump task means
cl. 3	“process the pump	an algorithm (and equivalents) that inspects the received

	requests and transfer resultant display and input directions to the display and input task means.”	pump request, selects a display and input operation, creates a display and input direction, and sends the message to the display and input task means
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**C. Infringement By The Dual-Display System Under The Doctrine Of Equivalents**

11. Touchcom has asserted that the Accused Systems infringe claims 1-3 of the '282 patent, both literally and under the doctrine of equivalents.

12. Touchcom served expert reports prepared by David Beazley Ph.D. and Ronald Santicola, who opined, *inter alia*, on the issues of infringement.<sup>3</sup> Both Dr. Beazley and Mr. Santicola concluded that there was literal infringement of claims 1-3 by the accused systems. *See* Beazley Decl. ¶¶ 5, 6.

13. Dr. Beazley and Mr. Santicola also concluded that the accused systems infringe the asserted claims under the doctrine of equivalents on various bases, including on the basis that a “dual-display” system is equivalent to a single display system. *Id.*

**D. Defendants’ Ensnarement Defense And The Hypothetical Claims**

14. Defendants contend that Touchcom’s application of the doctrine of equivalents to the “dual-display” system is not permissible because it is “ensnared” by the prior art.

15. Defendants raised the “ensnarement” defense for the first time in their Summary Judgment Motion. Def’s. Mot. Summ. Jud. Br., at 18-21 (D.I. 150). The five expert reports

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<sup>3</sup> *See* Expert Report of David Beazley Ph.D. Concerning Claim Construction, Infringement and Validity of the '282 Patent (served June 25, 2010) (“Beazley Report”), D.I.168-4; Supplemental Expert Report of David Beazley, Ph.D. Concerning the Infringement of the '282 patent (served July 21, 2010) (“Beazley Supp. Report”), D.I. 191-1 (Ex. 1), D.I. 191-2; Expert Report of Ronald P. Santicola Concerning Infringement of the '282 Patent (served June 25, 2010) (“Santicola Expert Report”), D.I. 168-3; Supplemental Expert Report of Ronald P. Santicola Concerning Infringement of the '282 Patent (served July 14, 2010) (“Santicola Supp. Report”), D.I. 168-5.

by Defendants' technical expert, Jack Grimes, Ph.D., are silent with respect to ensnarement.<sup>4</sup>

16. Dr. Grimes never opined that a hypothetical claim covering a "dual-display" system was ensnared by the prior art, but did opine that the alleged prior art references he cited, either alone or in combination, literally disclose the limitations of the asserted claims of the '282 patent, either through anticipation or obviousness. Grimes Invalidity Report, Exs. 2-7 (D.I. 162-3). Specifically, Dr. Grimes asserted the following grounds for invalidity of the '282 patent (*Id.*):

- a. Anticipation under 35 U.S.C. § 102(b) by U.S. Patent No. 3,931,497 (Gentile) ("497 Patent" or "Gentile"). *Id.* at Ex. 3.
- b. Anticipation under § 102(b) by the "public use" of the ARCO II System. *Id.* at Ex. 4; Second Stoyanov Decl. Ex. B (Def's. Second Suppl. Obj. and Resp. to Touchcom Interrogatory No. 5, Ex. A).
- c. Anticipation under § 102(b) by U.S. Patent No. 4,107,777 (Pearson) ("777 Patent" or "Pearson"). Grimes Invalidity Report at Ex. 2 (D.I. 162-3).
- d. Anticipation under § 102(b) by U.S. Patent No. 4,395,627 (Barker) ("627 Patent" or "Barker"), incorporating by reference U.S. Patent 4,199,100 (Wostl) ("100 Patent" or "Wostl"). *Id.* at Ex. 5.

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<sup>4</sup> See Expert Report Of Jack D. Grimes, Ph.D. On The Invalidity Of U.S. Patent 5,027,282 ("Grimes Invalidity Report"), D.I. 162-3; Rebuttal Expert Report Of Jack D. Grimes, Ph.D. On The Non-Infringement Of U.S. Patent No. 5,027,282 ("Grimes Non-Infringement Rebuttal Report"), D.I. 168-9; Rebuttal Expert Report Of Jack D. Grimes, Ph.D. On The Invalidity Of U.S. Patent No. 5,027,282 ("Grimes Invalidity Rebuttal Report"), D.I. 191-1 (Ex. 7), D.I. 191-2; Second Rebuttal Expert Report Of Jack D. Grimes, Ph.D. On The Non-Infringement Of U.S. Patent No. 5,027,282 ("Grimes Second Rebuttal Report"), D.I. 187-1 (Ex. D), D.I. 187-2; Third Rebuttal Expert Report Of Jack D. Grimes, Ph.D. On The Non-Infringement Of U.S. Patent No. 5,027,282 ("Grimes Third Rebuttal Report"), D.I. 187-1 (Ex. E), D.I. 187-2.

e. Obviousness under § 103 based on Gentile in combination with the “public use” of an ARCO II fuel-dispensing system (“ARCO II System”), as disclosed by Jaired Ellard’s deposition and an ARCO II System Evaluation Report (“ARCO II Report”).

*Id.* at Ex. 4.

f. Obviousness under § 103 based on Gentile in combination with U.S. Patent No. 4,630,754 (Komukai) (“754 patent” or “Komukai”), Pearson, and Barker. *Id.* at Ex. 7.

g. Obviousness under § 103 based on Barker in combination with Komukai and Prior art allegedly disclosed in the Background section of the ’282 patent. *Id.* at Ex. 6.<sup>5</sup>

17. For the present “ensnarement” proceedings, Touchcom has proposed hypothetical claims 1-3 that cover “dual-display” accused systems having separate sales and CAT displays. *See* Part III.A.3 *infra* (discussing legal analysis required for ensnarement). Hypothetical claim 1 is shown below. An underline indicates an addition to, and a strike-through indicates a deletion from, the original text of claim 1:

1. An interactive pump system capable of interacting with and responding to responses from a user, the system comprising;

a pump means;

a central processing unit connected to the pump means; and

a display and input means including a plurality of instruction displays, and being connected to the pump means and the central processing unit;

a transaction data display connected to the pump means;

wherein the pump means is operable to transmit transaction data, concerning fluid pumped, to the transaction data display which will

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<sup>5</sup> At his deposition, Dr. Grimes introduced additional obviousness combinations comprising: (a) each of his previously cited references in combination with the ‘777 Patent (Gentile); and (b) each of his previously cited references in combination with the ARCO II system and the ‘497 patent (Pearson). Second Stoyanov Decl. Ex. J at 44:11-45:20 (Grimes Dep. Tr.).

display the transaction data, and the display and input means  
~~which will display the transaction data,~~ display one instruction  
 display, and transfer input responses from a user to the central  
 processing unit, the central processing unit being operable to  
 process the input responses and to control the pump means  
 according to the responses,

characterized in that the central processing unit includes pump task  
 means, display and input task means and application task means,  
 each task means, in operation running concurrently with the other  
 task means, with the pump task means controlling the pump  
 means, the display and input task means controlling the display  
 and input means, and the application task means receiving and  
 processing the input responses and transferring results into pump  
 directions to the pump task means.

18. Claims 2 and 3 are dependent on Claim 1. Accordingly, in the context of the  
 ensnarement dispute, hypothetical claims 2 and 3 are dependent on the proposed  
 hypothetical claim 1, as shown below:

Claim 2. *The system of claim 1*, wherein the pump task means is  
 arranged, in controlling the pump means, to process the pump  
 directions and transfer pump commands to, and receive pump responses  
 from, the pump means; the display and input task means being  
 arranged, in controlling the display and input means, to transfer  
 displays and input commands to, and receive display responses and  
 input responses from, the display and input means, process the display  
 and input responses and transfer resultant display and input requests to  
 the application task means, and the application task means is arranged  
 to process the display and input requests and transfer resultant pump  
 direction to the pump task means.

(emphasis added).

Claim 3. *The system of claim 2*, wherein the pump task means  
 additionally is arranged to process the pump responses and transfer  
 resultant pump requests to the application task means, the application  
 task means additionally being arranged to process the pump requests and  
 transfer resultant display and input directions to the display and input  
 task means, which process the display and input directions.

(emphasis added).

19. Touchcom has set forth evidence that the accused products read on the hypothetical claims. *See* Beazley Declaration ¶¶ 5, 6; Part II.C *supra*.

**E. The Prior Art References Cited By Dr. Grimes Do Not Disclose The Required Task Means Or Concurrent Operation Of Those Task Means**

20. None of the references, or combinations of references, cited by Dr. Grimes, disclose the following claim limitations of the hypothetical claims, as they must for the ensnarement defense to apply: “pump task means,” “display and input task means,” “application tasks means,” and “each task means, in operation running concurrently with the other task means.”

**1. U.S. Patent No. 4,630,754 (Komukai) Lacks Multiple Elements Of The Hypothetical Claims**

21. The Komukai patent was issued on December 23, 1986. It discloses a self-service fuel supply system that “guides the operator step by step to perform a fuel filling operation” using a “fuel metering unit” (i.e. fuel dispensers). Second Stoyanov Decl. Ex. C (“754 patent”), at col. 1:45-58. The disclosed system is capable of controlling a “plural number of metering units simultaneously.” *Id.* col. 10:48-55.

22. Komukai does not disclose concurrent operation of tasks in a multi-tasking system, as required by the ’282 patent and the hypothetical claims. In addition, Komukai discloses a single operational sequence, and not separate pump, display and input and application tasks as required by the ’282 patent and the hypothetical claims.

23. Komukai discloses sequential operation of the steps needed to complete fueling operations at multiple metering units. While Komukai describes a “simultaneous” control of multiple units, this “simultaneous” control is achieved by repeating the same operational sequence at predetermined time intervals for each metering unit, rather than by concurrently

running multiple sequences. '754 patent col. 4:20-38; col. 4:33-38, Fig. 3 (the sequence for each dispenser is driven by logic gates 36-39, which are opened and closed sequentially at predetermined time intervals for each metering unit); *id.* at col. 10:48-55 (simultaneous control of multiple dispensers).

24. Komukai discloses a single operational sequence and not multiple “tasks.” The flowcharts illustrated in Figures 9(a) through 9(e) represent a single sequence. *See, e.g., id.* at Figs. 9(a)-9(e). For example, the sequence begins at the (START) label in Fig. 9(a) and steps through the operations shown in the Figure as “S1”—“S5.” *See id.* at Fig. 9(a). When the sequence reaches the decision point in step “S5,” it may advance to the flowchart in Fig. 9(b) as indicated by the circled number (2). *See id.* at Figs. 9(a), (b). Similarly, the operational sequence advances from Fig. 9(b) to Fig. 9(c) following the circled number (3). *See id.* at Figs. 9(a), (b). From Fig. 9(c) the operational sequence may go back to the steps of Fig. 9(a) as indicated by the circled number (1) following step “S25,” or it may continue on to the steps in Fig. 9(d) as indicated by the circled number (4) following step S26. *See id.* at Figs. 9(c)-(d). The sequential operation of the steps in Figures 9(a)-9(e) is illustrated in Appendix A hereto.

25. This conclusion is supported by Defendants’ submissions to the United States Patent and Trademark Office during prosecution and the patent examiner’s decision to allow the ’282 patent over the Komukai reference. Second Stoyanov Decl. Ex. A, at TCVA00004165. In response to a rejection over Komukai, Defendants amended the ’282 claims to specify that “the task means run concurrently with one another” and explained that Komukai “uses a programme which sequentially steps through a transaction” and does not “disclose an application task and other tasks running concurrently.” *Id.* at TCVA00004156-



57 (Petition to Make Special, p. 2-3, Dec. 15, 1989); *see also id.* at TCVA00004135 (International Preliminary Examination Report, at 2, Oct. 9, 1989). The examiner concluded that the amended claim language concerning concurrently running tasks distinguished it from Komukai. *Id.* at TCVA00004165 (indicating that “claims 1-16 are allowed”); *see also id.* at TCVA00004140 Amended Report replacing the October 9, 1989 preliminary report (“[n]either of the cited documents discloses or suggests an interactive pump system of the type specified in lines 1-18 of claim 1 wherein the central processing unit has pump task means, display and input task means and application task means each, in operation, running concurrently in the manner specified”). Recognizing that the Komukai reference discloses a single operational sequence, the examiner allowed the claims of the ’282 patent. *Id.* at TCVA00004165.

26. The patent examiner’s recognition that Komukai did not disclose the concurrently running tasks claimed in the ’282 patent is a benchmark against which the additional prior art relied on by defendants must be judged.

27. In addition, Komukai does not disclose a pump task structure consistent with the Court’s constructions for the pump task means in claims 1, 2 and 3. *See* Part II.B *supra*. In fact, Komukai does not even describe any pump operations, and merely mentions that a control system starts and stops the pump motor. ’754 patent col. 3:49-65. Thus, Komukai does not disclose command codes, control messages, writing of control messages on the connection between the CPU and the pump, reading of pump responses from that connection, creating of pump event messages and writing of the event messages to an event queue, as required by the pump task structures of claims 1, 2 and 3.

28. Komukai does not disclose a display and input task structure consistent with the Court's constructions for the display and input task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, in Figures 9(a) through 9(e) Komukai merely shows a sequence of instructional pictures and sounds, identified with the letters A-R, and shown in Figures 8(a)-(c). *See e.g.*, '754 patent col. 7:36-40 (Figures 9(a) through 9(e) describe the "the graphic and verbal guide operations"). The letters "A" through "R" correspond to the verbal and guide operations shown in Figures 8(a)-8(c)). *Id.* at Figs. 8(a)-(c), 9(a)-(e). Those picture sequences do not disclose command codes, control messages, writing of control messages to the connection between the CPU and the display and input, command types, selection of procedures to execute, display and input responses, creation of event messages, and writing event messages to an event queue, as required by the display and input task structures of claims 1, 2 and 3.

29. Komukai does not disclose an application task structure consistent with the Court's constructions for the application task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, as explained above, Komukai does not give any detail about pump operations, and only describes a sequence in which various instructional pictures are displayed. Thus, Komukai do not disclose the creation of a pump or display and input direction messages, sending of messages to a pump task or to a display and input task, and receiving pump requests or display and input requests, as required by the task structures of claims 1, 2 and 3.

30. Thus, Komukai does not disclose at least the claim limitations (1) "each task means, in operation running concurrently with the other task means," (2) "pump task

means,” (3) “display and input task means” or (4) “application task means” of hypothetical claims 1-3.

**2. U.S. Patent No. 3,931,497 (Gentile)  
Lacks Multiple Elements Of The Hypothetical Claims**

31. The '497 Gentile patent was issued on January 6, 1976. It discloses a semi-attended operation of automated fuel dispensers using a computerized credit authorization and billing techniques. *See, e.g.*, Second Stoyanov Decl. Ex. D (“’497 Patent”), Abstract.

32. Gentile does not disclose a pump task, display and input task, application task, or the concurrent operation of tasks in a multi-tasking system, as required by the '282 patent and the hypothetical claims.

33. Gentile, like Komukai, discloses a single operational sequence of the steps needed to complete the fueling operation, not multiple “tasks.” For example, Gentile describes the system operation using language clarifying that the operations are sequential. *See, e.g., id.*, at col. 7:15-18 (“This is the first in a sequence of step by step operating instructions leading to a completed transaction.”), col. 10:24, 27, 33 (“the sequence advances ...” from step to step in Fig. 9 and then to Fig. 15), col. 10:35-38 (“Sequence advances to a release card operation 168 of Fig. 15”), col. 10:43, 48-50 (describing that a subroutine 172 is entered, and “following the subroutine 172” the sequence continues with step 174.”).

34. The flowcharts illustrated in Figures 9 through 18 represent a single sequence that is split into smaller portions for clarity. *Id.*, at Figs. 9-18. For example, in Figure 9, the logic sequence begins as indicated by the (START) label, steps through the various steps, and when it reaches step 180, proceeds to one of the steps identified with the circled numbers (3)-(7). *Id.*, at Fig. 9. Each of those numbers indicates the beginning of another

flowchart (illustrated in a different figure) executed in sequence with the flowchart in Fig. 9.

*Id.* In the previous example, the next step identified by the number 3 is in Fig. 15, number 4 – Fig. 14, number 5 – Fig. 13, number 6 – Fig. 11, and number 7 – Fig. 12. *Id.*, at Figs. 11-14. Similarly, all the flowcharts in Figures 9-18 are interconnected using labels (e.g. numbers or words) to indicate how the logic sequence must proceed when it reaches a particular location in the flowchart.

35. This Court’s finding is consistent with the conclusions reached by the examiner during the prosecution of the ’282 patent. The examiner concluded that the ’282 patent was patentable over Komukai, because the reference did not disclose concurrently running tasks, but rather a single operational sequence. Gentile also uses a single operational sequence and thus is no better than Komukai, over which the USPTO allowed the patent claims.

36. In addition, Gentile does not disclose a pump task structure consistent with the Court’s constructions for the pump task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, Gentile describes various flowcharts that identify high level pump operations, as illustrated, for example in Fig. 17. *See e.g.*, ’497 patent, Fig 17 (including operations such as “SET HIGH AND LOW FLOW,” “RELEASE HIGH AND LOW FLOW”). Those operations do not in any way disclose command codes, control messages, writing of control messages on the connection between the CPU and the pump, reading of pump responses from that connection, creating of pump event messages and writing of the event messages to an event queue, as required by the pump task structures of claims 1, 2 and 3.

37. Gentile does not disclose a display and input task structure consistent with the Court’s constructions for the display and input task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, Gentile contains various flowcharts that identify high level display and

input operations, as illustrated, for example in Fig. 9. *See e.g.*, '497 patent, Fig 9, blocks 152, 166 (illustrating operations to display various messages, e.g., "INSERT CARD OR DOLLAR BILL," "REMOVE CREDIT CARD"); *id.*, at Fig 9, blocks 156, 298 (illustrating input operations, e.g., "CREDIT CARD READ," "DISABLE CARD READER," etc.). Those operations do not disclose command codes, control messages, writing of control messages to the connection between the CPU and the display and input, command types, selection of procedures to execute, display and input responses, creation of event messages, and writing event messages to an event queue, as required by the display and input task structures of claims 1, 2 and 3.

38. Gentile does not disclose an application task structure consistent with the Court's constructions for application task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, as explained above, Gentile describes at a high level the operations that are performed by the pump, the display and the input devices. Those operations do not disclose creation of a pump or display and input direction messages, sending of messages to a pump task or to a display and input task, and receiving pump requests or display and input requests, as required by the task structures of claims 1, 2 and 3.

39. Thus, Gentile does not disclose at least the claim limitations (1) "each task means, in operation running concurrently with the other task means," (2) "pump task means," (3) "display and input task means" or (4) "application task means" of hypothetical claims 1-3.

### 3. The ARCO II System

#### *a) The ARCO II System Is Not Prior Art*

40. Defendants contend that the ARCO II System was a public use prior art. *See* Second Stoyanov Decl. Ex. B, at 2 and Ex. A thereto n.1. The ARCO II System allegedly was an automated fuel dispensing system allegedly created by companies called ARCO and Docutel.

41. Defendants have presented no documents evidencing the existence of any actual ARCO II System in public use. Instead, they rely exclusively on the testimony of Mr. Jaired Ellard, a consultant who testified that he worked on a prototype of the system, regarding their assertion that the ARCO II system was publicly used more than one year prior to the effective filing date of the '282 Patent. *See id.*; Grimes Invalidity Report at ¶ 70 (D.I. 162-3).

42. Defendants cite a report prepared by Mr. Ellard that evaluated the ARCO II prototype (“ARCO II Report”), and several snippets of handwritten computer code that were also drafted by Mr. Ellard. *See* Second Stoyanov Decl. Ex. B, at 1 n. 1 and Ex. I, 1-4.<sup>6</sup> It is undisputed that the prototype was never in public use; instead, Defendants contend that a final “ARCO II” system was the system in public use. The ARCO II Report contains Mr. Ellard’s recommendations for changing the prototype of the ARCO II software system based on his evaluation of that system. *See* Second Stoyanov Decl. Ex. I, 1-4. The handwritten computer code snippets illustrate some of Mr. Ellard’s recommendations. *Id.* at CTRL00111201-206, Second Stoyanov Decl. Ex. H, at 14:6-12. Mr. Ellard testified that the various handwritten notes including sample code and diagrams were “just an analysis, and

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<sup>6</sup> Both the handwritten code and the ARCO II Report are attached as Exhibit I to the Second Stoyanov Decl.

initial proposal—in a general sense of how to implement this thing” and not “final thing in each detail.” Second Stoyanov Decl. Ex. H, at 36:17-21. Neither the Report nor the handwritten code describes or evidences the alleged final ARCO II system. *Id.*

43. Mr. Ellard also testified he was not aware of any documentation or other proof that the ARCO II system was publicly used, *id.*, at 70:7-71:6, and Defendants have not identified any such corroborating documents. *See* Second Stoyanov Decl. Ex. B, at 1. While Mr. Ellard testified that he created certain software for the ARCO II system, the software he wrote was not incorporated into any installed ARCO II systems. Rather, he testified that the code he wrote was modified before any installation, and the code that he believed was installed is not available. *Id.* at 73:24-74:16, 74:4-6, 29:17-23. Further, Mr. Ellard was not aware of any documentation that shows what software was installed in any ARCO II system that may have been in public use. *Id.* at 68:25-69:6, 69:17-70:6. In sum, Mr. Ellard’s testimony fails to show either (1) the final, technical details of the alleged ARCO II system, or (2) that the alleged ARCO II system was actually in public use.

44. In addition, there is no evidence that any software code written for the ARCO II system was available to the public, or could be discerned by members of the public who allegedly used the ARCO II dispensers. Both the ARCO II Report and the handwritten code samples were marked “CONFIDENTIAL.”

45. For the foregoing reasons, neither the final alleged ARCO II system, nor the one described in the Report, were in public use, as explained in more detail in Part III.B.2, below.

***b) The ARCO II System Lacks Multiple Elements Of The Hypothetical Claims***

46. The ARCO II System does not disclose a pump task, display and input tasks, and application task running concurrently with each other. Instead, Mr. Ellard's testimony, the recommendations in the ARCO Report, and the handwritten code snippets, disclose, at most, that each dispenser in the system is controlled by a single, sequential application. *See, e.g.*, Second Stoyanov Decl. Ex. H at 23:16-24:6. Although Mr. Ellard asserts that the applications – one for each dispenser – operate “concurrently,” those applications are not organized as separate pump, display and input, and application tasks, as specifically required by the hypothetical claims. Beazley Rebuttal Report, at ¶ 75 (D.I. 168-6). Appendix B hereto illustrates the arrangement of the applications set forth in the ARCO II System as compared with any of the hypothetical claims.

47. Mr. Ellard testified that the ARCO II software used various routines and device handlers to communicate with the dispensers and the display and input devices. Second Stoyanov Decl. Ex. H at 24:13-27:12. Routines and Device handlers are not “tasks” consistent with the construction of that term as a “software module separately controlled by a multitasking operating system. Routines and devices handlers are not controlled by the operating system. Beazley Rebuttal Report, at ¶¶ 55, 57 (D.I. 168-6). Dr. Beazley testified that routines are frequently used portions of computer code that is run by the CPU in sequence with, and as part of, the steps of the main application program. Finally, device handlers are started and stopped by interrupts, which as explained below in the discussion of the Pearson and Wostl references, prevent the concurrent execution of tasks. *See infra*, ¶¶ 57, 58, 69. Thus, the application that controls each dispenser operates sequentially, like Komukai, and such operation does not anticipate the hypothetical claim.



48. This Court's finding is consistent with the conclusions reached during the prosecution of the '282 patent. The examiner concluded that the '282 patent was patentable over Komukai, because the reference did not disclose concurrently running pump, display and input, and application tasks, but rather a single operational sequence. The ARCO II System also uses a single operational sequence and thus is no better than Komukai, over which the USPTO allowed the patent claims.

49. In addition, the ARCO II System does not disclose a pump task structure consistent with the Court's constructions for the pump task means in claims 1, 2 and 3. *See* Part II.B *supra*. Mr. Ellard's testimony, the ARCO II Report, and the handwritten code snippets, do not in any way disclose command codes, control messages, writing of control messages on the connection between the CPU and the pump, reading of pump responses from that connection, creating of pump event messages and writing of the event messages to an event queue, as required by the pump task structures of claims 1, 2 and 3.

50. Similarly, the ARCO II System does not disclose a display and input task structure consistent with the Court's constructions for the display and input task means in claims 1, 2 and 3. *See* Part II.B *supra*. There is nothing in the ARCO II System that discloses command codes, control messages, writing of control messages to the connection between the CPU and the display and input, command types, selection of procedures to execute, display and input responses, creation of event messages, and writing event messages to an event queue, as required by the display and input task structures of claims 1, 2 and 3.

51. Finally, the ARCO II System does not disclose an application task structure consistent with the Court's constructions for the application task means in claims 1, 2 and 3.

*See* Part II.B *supra*. There is nothing in the ARCO II System that discloses creation of a pump or display and input direction messages, sending of messages to a pump task or to display and input task, and receiving pump requests or display and input requests, as required by the task structures of claims 1, 2 and 3.

52. Thus, The ARCO II System does not disclose at least the claim limitations (1) “pump task means,” (2) “display and input task means,” or (3) “application task means,” or (4) “each task means, in operation running concurrently with the other task means” of hypothetical claims 1-3.

#### **4. U.S. Patent No. 4,107,777 (Pearson) Lacks Multiple Elements Of The Hypothetical Claims**

53. The '777 Pearson patent was issued on August 15, 1978. It discloses a self-service fuel dispensing system that controls several fuel dispensers and displays the status of the fuel dispensers on an operator console. *See, e.g.*, Second Stoyanov Decl. Ex. E (“’777 patent”), Abstract.

54. Pearson does not disclose a pump task, display and input task, application task, or the concurrent operation of tasks in a multi-tasking system, as required by the '282 patent and the hypothetical claims.

55. Pearson, like Komukai, discloses a single operational sequence of steps needed to complete a fueling operation, not multiple “tasks.” The operational sequences of two separate embodiments are illustrated in the flowcharts in Figs 10A-13 of Pearson.<sup>7</sup> '777 patent col. 2:57-68, 10:25-12:66.

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<sup>7</sup> Although Figs 10B and 11 do not appear to be properly labeled, it appears that the Figure on the left side of Sheet 6 of 9 is Fig. 10B, and on the right side is Fig. 11.

56. The flowcharts illustrated in Figures 10A through 11, the first embodiment described in Pearson, represent a single sequence that is split into smaller portions for clarity. *Id.*, at Figs. 10A-11. For example, the sequence begins at step 500 (“ZERO OUT RAM”) in Fig. 10A, steps through the various steps of Figure 10A, and reaches step 528 “KEY SW[ITCH] OFF?” *Id.* at Fig. 10A. If, at step 528 the “Key Switch is Off,” the sequence continues to step 600, and steps through the steps of Figure 11. *Id.* at Fig. 10A, 11 (Fig. 11 is the right figure of Sheet 6 of 9), col. 11:16-19 (explaining that step 600 is illustrated in Figure 11). If the “Key Switch is On” at step 528 of Figure 10A, the sequence advances to step 530, and eventually reaches step 558. *Id.*, at Fig. 10, col. 11:19-23. From step 558 in Figure 10A, the sequence proceeds to the step identified with the circled letter (D), which indicates the beginning of the flowchart in Figure 10B. *Id.*, at Fig. 10A, 10B (Fig. 10B is the left figure of Sheet 6 of 9). The sequence steps through Figure 10B, until it reaches the steps indicated with circled letters (A) or (C). *Id.* at Fig. 10B. The letters (A) and (C) indicate that the sequence returns to Figure 10A at step 518 (indicated as (A)) or step 504 (indicated as (C)). *Id.* at Figs. 10A, 10B.

57. Similarly, the flowcharts in Figs. 12A and 12B, which together with the flowchart in Figure 13 illustrate the second embodiment in Pearson, represent a single sequence that is split into smaller portions for clarity. *Id.*, at Figs. 12A, 12B (indicating that the sequence advance from the steps of Figure 12A to the Figure 12B following the steps indicated with circled letters (A)-(C)). The sequence of the Figure 12A and 12B flowcharts runs on run on CPU 312. *See, e.g.*, ’777 patent col. 15:54-55. The sequence shown in the flowchart in Figure 13, is also a single sequence that runs on an altogether different CPU, 412, which is located in the dispenser. *See, e.g., id.* at Fig. 13, col. 18:44-54. Because the agreed

construction of “running concurrently” requires execution “on a single CPU,” and the steps of Figure 13 run on a CPU different from that which runs the steps of Figures 12A and 12B, Pearson does not disclose concurrently running tasks. Blocks 768-774 in Figure 12B of Pearson illustrate an interrupt routine “to update the data storage” during the update of the CRT display. *Id.*, at Fig. 12B, col. 18:26-39. Touchcom has presented evidence that interrupts cannot run concurrently with other software because by their very nature, interrupts disable all other operations until the interrupt routine is complete. *See* Beazley Expert Report ¶¶ 55, 57 (D.I. 168-6). The description of the interrupt routine in Pearson supports Dr. Beazley’s testimony. Further, Dr. Grimes, Defendants’ expert witness, testified at his deposition that the interrupt routine is not the same as concurrent operation. Second Stoyanov Decl. Ex. J, at 203:20-23.

58. Specifically, Pearson explains that after the interrupt is complete, the “CPU restores all registers to the state they were in prior to interrupt and returns to the routine where interrupt occurred.” ’777 patent at col. 18:36-38. That no change of status occurred during the interrupt routine, and that the CPU resumes its sequential operation from where it left off upon completion of the interrupt routine, supports the conclusion that the interrupt disables all other operations in the CPU, and does not run concurrently with any other software.

59. This Court’s finding is consistent with the conclusions reached by the examiner during the prosecution of the ’282 patent. The examiner concluded that the ’282 patent was patentable over Komukai, because the reference did not disclose concurrently running tasks, but rather a single operational sequence. Pearson also uses a single operational sequence and thus is no better than Komukai, over which the USPTO allowed the patent claims.

60. In addition, Pearson does not disclose a pump task structure consistent with the Court's constructions for the pump task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, Pearson describes various flowcharts that identify high level pump operations, as illustrated, for example in Figure 10A. *See e.g.*, '777 patent, Fig. 10A ("REMOTE PUMP MOTOR LOGIC", "DISARM UNUSED DISPENSERS"). Those operations do not in any way disclose command codes, control messages, writing of control messages on the connection between the CPU and the pump, reading of pump responses from that connection, creating of pump event messages and writing of the event messages to an event queue, as required by the pump task structures of claims 1, 2 and 3.

61. Pearson does not disclose a display and input task structure consistent with the Court's constructions for the display and input task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, Pearson describes various high level display and input operations, as illustrated, for example in Fig. 10A. *See e.g.*, '777 patent, Fig. A, (illustrating display operations, e.g., "OUTPUT PRICE PER GALLING TO CRT," "OUTPUT PRICE TO PUMPS"). Those operations do not disclose command codes, control messages, writing of control messages to the connection between the CPU and the display and input, command types, selection of procedures to execute, display and input responses, creation of event messages, and writing event messages to an event queue, as required by the display and input task structures of claims 1, 2 and 3.

62. Pearson does not disclose an application task structure consistent with the Court's constructions for the application task means in claims 1, 2 and 3. *See* Part II.B *supra*. Instead, as discussed in the previous two paragraphs, Pearson describes various high level pump and display and input operations that do not disclose creation of a pump or display

and input direction messages, sending of messages to a pump task or to display and input task, and receiving pump requests or display and input requests, as required by the task structures of claims 1, 2 and 3.

63. Thus, Pearson does not disclose at least the claim limitations (1) “each task means, in operation running concurrently with the other task means,” (2) “pump task means,” (3) “display and input task means” or (4) “application task means” of hypothetical claims 1-3.

#### **5. U.S. Patent Nos. 4,395,627 (Barker), and 4,199,100 (Wostl) Lack Multiple Elements Of The Hypothetical Claims**

64. The Barker patent was issued on July 26, 1983. Second Stoyanov Decl. Ex. F (“’627 Patent”). Barker incorporates by reference the ’100 patent (Wostl), which issued on April 22, 1980. Second Stoyanov Decl. Ex. F (“’627 Patent”), Ex. G (“’100 patent”). Barker and Wostl generally describe a dispensing system that contains a customer console and an operator console. *Id.* Below Barker and Wostl are discussed together.

65. Barker and Wostl do not disclose a pump task, display and input task, application task, or the concurrent operation of tasks in a multi-tasking system, as required by the ’282 patent and the hypothetical claims.

66. The language used to describe the system operation in Barker and Wostl evidences sequential operation of steps on multiple CPU’s. *See, e.g.*, ’627 patent, col. 9:64-67 (describing that “microcomputers 63, 67 step through a control sequence of steps 65 diagrammatically shown in the flow charts of FIGS. 6 and 7”) (emphasis added), Fig. 5A (illustrating two CPU’s – one in the customer console and on in the attendant console); ’100 patent col. 6:55-68, Fig. 4 (describing “a basic executive control sequence” which “step[s] through successive steps S2-S4” to evaluate the status of 3 different flags.”).

67. Barker, like Komukai, discloses a single operational sequence of the steps needed to complete the fueling operation, not multiple “tasks.” The flowcharts in Figures 6 and 7 in Barker represent a single sequence that is split into smaller portions for clarity. ’627 patent Figs. 6, 7. For example, the sequence starts in step S1 of Figure 6, steps through the following steps and eventually may advance to the flowchart of Figure 7, as indicated below step S14 with the text “TO STEP S15 FIG. 7.” *Id.* at Figs. 6, 7.

68. Similarly, Wostl discloses a single operational sequence, and not multiple “tasks.” For example, the flowcharts in Figures 4, and 6 through 9 represent a single sequence that is split into smaller portions for clarity. ’100 patent Figs. 4, 6-9. For example, the sequence starts in block S1 in Figure 4 and proceeds to one of the steps S5 through S6, indicated as (CR), (KYBD) and (PAID). *Id.*, at Fig. 4. Step S5 (CR) is the first step of the flowchart in Figure 6, step S6 (KYBD) – in Figure 7, step S7 (PAID) – in Figure 9. *Id.*, at Figs. 4, 6, 7, 9. In one example, the sequence will continue from Figure 4 to Figure 6, following step S5 (CR). *Id.*, at Figs. 4, 6. Continuing this example, the sequence will step through the flow in Figure 6, and eventually advance to the step S26, indicated as (EXEC). *Id.*, at Fig. 6. From there, the sequence advances from Fig. 6 back to Figure 4, as indicated by the (EXEC) step in Figure 4. *Id.* at Figs. 6, 4.

69. The flowcharts in Figures 5A and 5B in Wostl illustrate the use of interrupts. *Id.*, at 2:59-60. As discussed above, with respect to the Pearson reference, interrupts are not tasks that run concurrently with other software because interrupts disable the execution of other operations. *See supra* ¶¶ 57, 58. Wostl supports that conclusion by explaining that the use of interrupts prevents multiple tasks from running concurrently. *See, e.g.*, ’100 patent, Col. 7:12-35 (explaining that the system only honors an interrupt request “at the completion

of the current instruction being executed,” and if “substantially simultaneous interrupts” a signal instructs “the operator to re-perform his previous actions in a successive manner.”).

70. This Court’s finding is consistent with the conclusions reached by the examiner during the prosecution of the ’282 patent. The examiner concluded that the ’282 patent was patentable over Komukai, because the reference did not disclose concurrently running tasks, but rather a single operational sequence. Barker and Wostl also use a single operational sequence and thus are no better than Komukai, over which the USPTO allowed the patent claims.

71. In addition, Barker and Wostl do not disclose a pump task structure consistent with the Court’s construction for the pump task means in claims 1, 2 and 3. *See* Part II.B *supra*. The operations described in the flowcharts and specifications of both Barker and Wostl do not in any way disclose command codes, control messages, writing of control messages on the connection between the CPU and the pump, reading of pump responses from that connection, creating of pump event messages and writing of the event messages to an event queue, as required by the pump task structures of claims 1, 2 and 3.

72. Barker and Wostl do not disclose a display and input task structure consistent with the Court’s constructions for the display and input task means in claims 1, 2 and 3. *See* Part II.B *supra*. Barker and Wostl do not disclose any disclose command codes, control messages, writing of control messages to the connection between the CPU and the display and input, command types, selection of procedures to execute, display and input responses, creation of event messages, and writing event messages to an event queue, as required by the display and input task structures of claims 1, 2 and 3.



73. Barker and Wostl do not disclose an application task structure consistent with the Court's constructions for the application task means in claims 1, 2 and 3. *See* Part II.B *supra*. The operations described in Barker and Wostl do not disclose creation of a pump or display and input direction messages, sending of messages to a pump task or to display and input task, and receiving pump requests or display and input requests, as required by the task structures of claims 1, 2 and 3.

74. Thus, Barker and Wostl do not disclose at least the claim limitations (1) "each task means, in operation running concurrently with the other task means," (2) "pump task means," (3) "display and input task means" or (4) "application task means" of hypothetical claims 1-3.

#### **6. Any Prior Art Allegedly Disclosed In The '282 Patent Lacks Multiple Elements Of The Hypothetical Claims**

75. The '282 patent-in-suit does not disclose prior art having separate displays for instructions and for transaction data. Defendants assert that the background section of the '282 patent discloses the prior art that has two separate displays. *See* Def. Br. at 20 (citing '282 patent at 1:21-27). But the background section of the '282 patent does not describe such features in the prior art. *Id.* Indeed, the portion of the '282 patent cited by Defendants discloses a single display for transaction data and there is absolutely no disclosure of "dual displays":

These electronic pumps can accept prepayment when equipped with a card and note reading facility. Transaction data is displayed to customers via liquid crystal displays similar in function and layout to the mechanical display system used in mechanical 25 pumps. The electronic pump can keep track of transaction data for itself. '282 patent at 1:21-27 (D.I. 168-2).

76. Even if the '282 patent background section disclosed any relevant prior art, there is absolutely no discussion, not even a suggestion, of pump, display and input, and application tasks running concurrently in a multitasking operating system. *Id.* at col. 1:8-40 (Background Section).

#### **F. Summary Of Missing Claim Limitations In The Prior Art**

77. As set forth in Part II.E *supra*, the asserted prior art references do not disclose the following claim limitations, as summarized in the chart below.

<b>Claim Limitation</b>	<b>Komukai</b>	<b>Gentile</b>	<b>ARCO II</b>	<b>Pearson</b>	<b>Barker</b>	<b>Wostl</b>	<b>'282 patent Background</b>
pump, display and input, and application tasks in operation running concurrently	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed
pump task structure	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed
display and input task structure	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed
application task structure	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed	not disclosed

78. U.S. Patent No. 4,630,754 (Komukai) does not disclose “concurrent operation,” the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the '282 patent.

79. U.S. Patent No. 3,931,497 (Gentile) does not disclose “concurrent operation,” the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the ’282 patent.

80. Assuming, incorrectly, that ARCO II was prior art, it did not have “concurrent operation of pump, display and input or application tasks,” or the structures for the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the ’282 patent.

81. U.S. Patent No. 4,107,777 (Pearson) does not disclose “concurrent operation,” the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the ’282 patent.

82. U.S. Patent No. 4,395,627 (Barker) does not disclose “concurrent operation,” the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the ’282 patent.

83. U.S. Patent No. 4,199,100 (Wostl) does not disclose “concurrent operation,” the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the ’282 patent.

84. Any prior art disclosed in the ’282 patent does not disclose “concurrent operation,” the pump task means, the display and input task means, or the application task means, as required by the hypothetical claims of the ’282 patent.

85. Accordingly, as explained below in Part III.B.3 of the Conclusions of Law, none of the cited references anticipate or render obvious the hypothetical claims applicable to the ensnarement issue.

### **III. PROPOSED CONCLUSIONS OF LAW**

#### **A. Background Legal Principles**

##### **1. Defendants Have Asserted Ensnarement In The Context Of Summary Judgment**

86. “Ensnarement” is a defense to infringement under the doctrine of equivalents, and it must be raised by defendants and decided in the context of a motion for summary judgment or a motion for judgment as a matter of law at the close of trial. *Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1324 (Fed. Cir. 2009) (holding that ensnarement must be determined “either on a pretrial motion for partial summary judgment or a motion for judgment as a matter of law at the close of the evidence and after the jury verdict.”). Here the Defendants have asserted the ensnarement defense in a summary judgment motion.

87. Rule 56(c) provides for summary judgment if the Court, viewing the record as a whole, determines “that there is no genuine issue as to any material fact and that the movant is entitled to a judgment as a matter of law.” Fed. R. Civ. P. 56(c). In deciding a motion for summary judgment, the Court must view the facts, and inferences to be drawn from the facts, in the light most favorable to the nonmoving party. *Applied Material, Inc. v. Tokyo Seimitsu, Co.*, 446 F. Supp. 2d 538, 543 (E.D. Va. 2006) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986)). To defeat summary judgment, the nonmoving party must go beyond the pleadings with affidavits, depositions, interrogatories, or other evidence to show that there is in fact a genuine issue for trial. *Id.* (citing *Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986)). Summary judgment should be granted only “where it is perfectly clear that no issue of fact is involved and inquiry into the facts is not

necessary to clarify the application of the law.” *McKinney v. Bd. of Tr. of Maryland Cmty. Coll.*, 955 F.2d 924, 928 (4th Cir. 1992).

88. Ensnarement is an issue of law, based on underlying questions of fact. *See Depuy Spine*, 567 F.3d at 1323-24. When the material underlying facts are in dispute, the court may seek a jury determination on those facts. *See id.* at 1324 (“If a district court believes that an advisory verdict would be helpful, and that a ‘hypothetical claim’ construct would not unduly confuse the jury as to equivalence and validity, then one may be obtained under Federal Rule of Civil Procedure 39(c).”) (citation omitted).

## **2. Patent Infringement and the Doctrine of Equivalents**

89. The question of “ensnarement” arises in the context of patent infringement under the doctrine of equivalents. A determination of infringement requires a two-step analysis. “First, the court determines the scope and meaning of the patent claims asserted . . . and then the properly construed claims are compared to the allegedly infringing device.” *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (citations omitted). Under the “all elements” rule, comparison of the claim to the accused device requires a finding that every limitation of the claim or its equivalent be found in the accused device. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

90. When an accused system does not literally infringe a claim because it lacks a claim element, it can still infringe under the doctrine of equivalents if it includes the equivalent of that element. *See id.* at 28-29. Designed to protect a holder of a patent from an infringer who appropriates an invention but avoids the literal language of the claim, the doctrine of equivalents allows a finding of infringement when the accused product and

claimed invention perform substantially the same function in substantially the same way to yield substantially the same result—the so called “triple identity” test. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608-609 (1950) (citations omitted).

Infringement under the doctrine of equivalents may also be found when the accused device contains an “insubstantial” change from the claimed invention. *See Graver Tank*, 339 U.S. at 610. The doctrine of equivalents includes new equivalents that develop after a patent has issued, as well as the full range of equivalents known at the time of infringement. *See Warner-Jenkinson*, 520 U.S. at 37.

91. The “all elements” rule is applicable to infringement under the doctrine of equivalents just as it is to literal infringement, and accordingly the essential inquiry is whether “the accused product or process contain elements identical or equivalent to each claimed element of the patented invention[.]” *Id.* at 40. “The doctrine of equivalents is not a license to ignore claim limitations.” *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 398 (Fed. Cir. 1994).

92. Plaintiffs contend that a fuel-dispenser system with dual displays is equivalent to a system with a single display because it is an “insubstantial” change or, alternately, because it performs substantially the same function in substantially the same way to yield substantially the same result. *See, e.g.*, Santicola Report (D.I. 168-3), ¶ 81, Santicola Suppl. Report (D.I. 168-5), ¶ 76; Part II.C *supra*.

### **3. Ensnarement Is A Defense To Infringement Under The Doctrine Of Equivalents**

93. Ensnarement is a legal limitation on the doctrine of equivalents. *Depuy Spine*, 567 F.3d at 1322. “Ensnarement bars a patentee from asserting a scope of equivalency that would encompass, or ‘ensnare,’ the prior art.” *Id.* “[A] patentee should not be able to

obtain, under the doctrine of equivalents, coverage which he could not lawfully have obtained from the PTO by literal claims.” *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 684 (Fed. Cir. 1990), *overruled in part on other grounds*, *Cardinal Chem. Co. v. Morton Int’l*, 508 U.S. 83, 92 (1993). A patentee cannot claim infringement based on an equivalent that would have been anticipated or rendered obvious by the prior art under 35 U.S.C. §§ 102 & 103. *Wilson Sporting Goods*, 904 F.2d at 683-85.

94. To determine whether ensnarement applies, the Court may construct a hypothetical claim that literally covers the accused device. *Depuy Spine*, 567 F.3d at 1324; *Wilson Sporting Goods*, 904 F.2d at 684. Next, the prior art introduced by the accused infringer is assessed to determine whether all the elements of the hypothetical claim are disclosed by the prior art under § 102 or § 103. *Depuy Spine*, 567 F.3d at 1325. The accused infringer has the burden to identify the prior art it contends is “ensnared” by the prior art. *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371, 1381 (Fed. Cir. 2001). “Both anticipation under § 102 and obviousness under § 103 are two-step inquiries.” *Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003) (citations omitted). In the first step, the Court must construe the claims, which is a question of law. *Id.* In the second step, the properly construed claims are compared to the prior art. *Id.*

95. The hypothetical claim is anticipated under § 102 if a single prior art reference discloses each and every limitation. *Applied Material*, 446 F. Supp. 2d at 551 (“[I]nvalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.”) (citing *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir.

2000)). Anticipation is a question of fact. *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 299, 302 (Fed. Cir. 1995). Similarly, what a prior art reference discloses is also a factual determination. *Kim v. ConAgra Foods, Inc.*, 465 F.3d 1312, 1325 (Fed. Cir. 2006) (citation omitted).

96. The hypothetical claim is rendered obvious under § 103 if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C § 103. The determination of obviousness under 35 U.S.C. § 103 is a legal question based on underlying questions of fact, including: 1) the scope and content of the prior art; 2) the differences between the prior art and the claimed invention; 3) the level of ordinary skill in the art; and 4) any relevant secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). A “patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Rather, the court must “look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.*

97. If the hypothetical claim would not have been invalid in view of the prior art, then the prior art does not bar the application of the doctrine of equivalents. *Marquip, Inc. v. Fosber Am., Inc.*, 198 F.3d 1363, 1367 (Fed. Cir. 1999). Conversely, if the hypothetical



claim would have been invalid, the prior art bars application of the doctrine and infringement by equivalence may not be found on that element. *Id.*

98. The “all elements” rule applies to ensnarement, just as it does to infringement and validity. The focus is not on whether the prior art discloses just the structures that the patentee argues are equivalent to a single claimed element, but on whether the prior art discloses all the elements of the hypothetical claim. *Depuy Spine*, 567 F.3d at 1325-27 (emphasis added) (finding no ensnarement when prior art did not disclose one of the claim elements, the “compression member”).

99. Claims 2 and 3 in this case, which depend upon claim 1, are analyzed separately. Because dependent claims have additional claim limitations, it is possible that an independent claim might ensnare the prior art, while the dependent claim does not. *Wilson Sporting Goods*, 904 F.2d at 686 (“The dependent claims, of course, are narrower than claim 1; therefore, it does not automatically follow that the ranges of equivalents of these narrower claims would encompass the prior art, because of their added limitations.”).

#### **4. The Present Findings Only Concern Whether Plaintiffs May Assert Infringement Under The Doctrine Of Equivalents By The Dual-Display System**

100. Determining whether the scope of equivalents accorded to a particular claim would encompass the prior art is an issue of law, based on underlying questions of fact. *See Depuy Spine*, 567 F.3d at 1324.

101. Defendants have not raised, and accordingly the Court does not address, whether Plaintiffs may assert the doctrine of equivalents as to any claim limitations other than the dual-display limitation. (*See* Def. Sum. Jud. Br. (D.I. 150) at 19-21). Similarly, determination of whether an accused device infringes literally or by equivalents is an issue

of fact for the jury, and accordingly is not currently before the Court. *Markman v. Westview Instruments*, 517 U.S. 370, 384 (U.S. 1996) (infringement “is a question of fact, to be submitted to a jury”) (citations omitted).

102. Further, the ensnarement issue does not in any way affect the presumed validity of the actual patent claims. The patent claims will remain valid regardless of the Court’s ruling on ensnarement. *Wilson Sporting Goods*, 904 F.2d at 685 (“Wilson’s claims will remain valid whether or not Wilson persuades us that it is entitled to the range of equivalents sought here.”); *Depuy Spine*, 567 F.3d at 1323 (“The ensnarement inquiry is separate and distinct from the jury’s element-by-element equivalence analysis, and it has no bearing on the validity of the actual claims.”). “Ensnarement” and validity are two separate determinations. The ensnarement analysis differs from an invalidity analysis in that, in ensnarement, the patentee bears the burden to show, by a preponderance of the evidence, that the hypothetical claim does not read on the prior art raised by the Defendants. *See Interactive Pictures*, 274 F.3d at 1381. By contrast, because patents are presumed valid, 35 U.S.C. § 282, invalidity is an affirmative defense which the defendant must demonstrate by clear and convincing evidence. *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1351-52 (Fed. Cir. 2010) (upholding jury finding of nonobviousness); *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 847 (Fed. Cir. 2010). Moreover, Plaintiffs are entitled to a jury trial on Defendants’ defense of patent invalidity. *See In re Tech. Licensing Corp.*, 423 F.3d 1286, 1291 (Fed. Cir. 2005) (as long as the infringement claim could give rise to a jury trial, the defense of invalidity is tried to a jury as well); *Tights, Inc. v. Stanley*, 441 F.2d 336, 338 (4th Cir. 1971) (vacating the denial of a jury trial on patent validity and infringement because plaintiff was “entitled to demand trial by jury” on the “validity and infringement of

the patent”); *see also Rothman v. Target Corp.*, 556 F.3d 1310, 1317 (Fed. Cir. 2009) (“In considering the district court's denial of [Plaintiff's] motion for JMOL of nonobviousness, this court reviews the jury's conclusions on obviousness, a question of law, without deference, and the underlying findings of fact, whether explicit or implicit within the verdict, for substantial evidence.”) (citations omitted); *Harrington Mfg. Co. v. Taylor Tobacco Enters., Inc.*, 664 F.2d 938, 939 (4th Cir. 1981) (district court properly submitted the ultimate legal issue of patent validity to the jury). Further, ensnarement relates solely to the issue of infringement by equivalents, and does not related to the issue of literal infringement. *See Depuy Spine*, 567 F.3d at 1322 (“Ensnarement bars a patentee from asserting a scope of equivalency that would encompass, or ‘ensnare,’ the prior art.”).

103. The sole question before this Court, accordingly, is whether claims of the '282 patent, which literally include a single display, would have been anticipated or rendered obvious by the prior art if expanded under the doctrine of equivalents to include “dual displays.” As explained in more detail below, the Court concludes that the hypothetical claims directed to a system with a “dual display” would not have been invalid in view of the prior art for the same reasons that the '282 patent was originally granted. Thus ensnarement does not preclude the application of the doctrine of equivalents with regard to the “dual-display” devices.

#### **B. The Hypothetical Claims Are Not Ensnared By The Prior Art**

104. The application of the doctrine of equivalents is not precluded by ensnarement, for three reasons. First, Defendants have not met their burden to come forward with prior art. Second, one of the purported prior art references, the “ARCO II” system, does not qualify as prior art because it was not in “public use.” Finally, none of the

prior art presented ensnares the hypothetical claims because the prior art fails to disclose multiple claim limitations of the hypothetical claims.

**1. Defendants Have Not Met Their Burden To Produce Evidence Of Prior Art**

105. The Defendants have the burden of producing evidence of prior art to challenge the hypothetical claims. *Interactive Pictures*, 274 F.3d at 1381 (“The burden of producing evidence of prior art to challenge a hypothetical claim rests with an accused infringer . . . .”) (citation omitted). Although the ultimate burden of persuasion rests on the patentee, once the patentee makes out a prima facie case of infringement by equivalence, the accused infringer must come forward with evidence that the hypothetical claim reads on the prior art. *See Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.*, 204 F.3d 1360, 1364-65, 1366-67 (Fed. Cir. 2000) (defendants satisfied their burden by “presenting considerable evidence,” including testimony and corroborating evidence, “that [the patentees] hypothetical claim would not have been allowed by the PTO.”). The plaintiffs must meet their burden of persuasion by a preponderance of the evidence. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 526 F. Supp. 2d 162, 165 (D. Mass. 2007).

106. Plaintiffs have made a prima facie case of infringement by equivalence. As set forth in the conclusions of fact, above, the hypothetical claims would literally read on the accused system. *See* Parts II.C-D, *supra*. Accordingly, Defendants have the burden to produce prior art to challenge the hypothetical claims.

107. The Court finds that the Defendants did not meet their threshold burden of producing evidence of prior art to challenge the hypothetical claims. Defendants’ summary judgment motion on the issue of ensnarement did not identify, or even cite to, a single prior art reference. Def. Sum. Jud. Br. (D.I. 150) at 19-21. At most, Defendants merely alleged

that the “Background of the Invention” section of the ’282 Patent disclosed that “the prior art included two displays.” *Id.* at 20. As set forth in the findings of fact, above, however, Plaintiffs have misread the disclosure of the ’282 patent, which does not, in fact, disclose the dual-display system of the hypothetical claim. But even if it did disclose a “dual display” model, Defendants still do not satisfy their burden because Defendants failed to identify art that addresses all of the claim elements, including the “concurrent operation” element. *See* Part II.E-F, *supra*. The hypothetical claims cannot ensnare the prior art unless the prior art anticipates or renders obvious all of the claim limitations. *See Depuy Spine*, 567 F.3d at 1325-27.

108. Only in their reply brief did Defendants first contend that the prior art was identified in the “six detailed claim charts” from Dr. Grimes’ invalidity expert reports—reports which was not submitted with Defendants’ opening papers. Def. Reply Br., D.I. 162 at 11. This Court will not accept arguments offered for the first time in a reply brief, as they were not properly asserted in the opening brief. *See Dukes v. United States*, No. RWT 09cv135, 2009 U.S. Dist. LEXIS 102271 at \*4 (D. Md. Nov. 2, 2009) (“The ordinary rule in federal courts is that an argument raised for the first time in reply brief or memorandum will not be considered.”) (citation omitted).

109. In any event, as stated above in the findings of fact above, none of the six claim charts in Dr. Grimes’ expert reports addresses the issue of ensnarement. *See* Part II.D, *supra*. Dr. Grimes cites several alleged prior art references and opines that those references, either alone or in combination invalidate the asserted claims through anticipation or obviousness. But, Dr. Grimes does not identify a single prior art reference that “ensnares” a hypothetical claim. Nor does he address equivalents at all—none of Dr.

Grimes' claim charts address whether the prior art references disclose a "dual display."

Accordingly, Defendants have not met their burden of coming forward with the prior art they contend ensnares the hypothetical claim.

110. However, even if the Defendants had met their burden, the hypothetical claims do not ensnare any of the prior art references raised in Defendants' invalidity report, as set forth below in Part III.B.3.

## **2. ARCO II Does Not Qualify As A "Prior Art" Reference**

111. This Court concludes that, on this record, ARCO II is not prior art because the evidence is neither sufficient to establish that the ARCO II system was used publicly prior to the critical date, nor is it sufficient to establish the structure, function, or operation of such system. Further, the reference does not qualify as prior art because the details of the system were secret.

112. Under 35 U.S.C. § 102(b), a "person shall be entitled to a patent unless . . . the invention was . . . in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States . . . ." 35 U.S. C. §102(b). The application that lead to the '282 patent was filed on August 6, 1987; thus a reference that was in "public use" prior to August 6, 1986 would qualify as a prior art reference. Defendants assert that the ARCO II system is 102(b) prior art because they allege it was "in public use" more than "one year before the filing date of the '282 patent." Defendants' Second Supplemental Objections and Responses to Plaintiffs' Interrogatory No. 5 (Second Stoyanov Decl. Ex. B) at 2, and n.1 to the attached chart.

113. Whether a reference was in public use prior to the critical date, and is therefore prior art, is a question of law based on underlying fact questions. *See Typeright*

*Keyboard Corp. v. Microsoft Corp.*, 374 F.3d 1151, 1157-59 (Fed. Cir. 2004) (although obviousness was a question of law based on underlying questions of fact, patentee was entitled to jury determination of whether a particular reference qualified as prior art when material facts were in conflict). It is Defendants' burden to establish that the purported prior-art reference was, in fact, in public use by the purported date. *See Ultra-Tex Surfaces*, 204 F.3d at 1364-1365 (defendant alleging ensnarement put forward evidence of alleged prior public use); *Interactive Pictures*, 274 F.3d at 1381 (the burden of producing evidence of prior art to challenge a hypothetical claim in an ensnarement analysis rests with an accused infringer); *see also Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1576 (Fed. Cir. 1996) (Defendant "bore the burden of persuasion by clear and convincing evidence on all issues relating to the status of the [reference] as prior art.").

114. "Public use" includes any public use of the claimed invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor. *Motionless Keyboard Co. v. Microsoft Corp.*, 486 F.3d 1376, 1384 (Fed. Cir. 2007) (citations omitted). To qualify as "public use," the device must have been actually used for its intended purpose. *Id.* at 1385 (computer keyboard not "used" when not connected to computer and not used for its intended purpose of transmitting data). Further, limited testing of the device may not rise to the level of "public use." *Id.* ("In this case, the one time typing test coupled with a signed NDA and no record of continued use of the [keyboard] did not elevate to the level of public use.").

115. Defendants entirely rely on the oral testimony of Mr. Jaired Ellard to establish that a fuel-dispenser system created by the ARCO company ("the ARCO II system") was publicly used in the 1970s, and that it contained certain features. Oral testimony

concerning the existence of prior art requires corroboration, even when the testimony is from an allegedly uninterested party. *Juicy Whip, Inc. v. Orange Bang, Inc.*, 292 F.3d 728, 737-38, 42 (Fed. Cir. 2002) (as a matter of law, uncorroborated oral testimony was insufficient to establish public use); *Finnigan Corp. v. Int’l Trade Comm’n*, 180 F.3d 1354, 1369 (Fed. Cir. 1999) (“[C]orroboration is required of any witness whose testimony alone is asserted to invalidate a patent, regardless of his or her level of interest.”). Reliable evidence of corroboration preferably comes in the form of physical records that were made contemporaneously with the alleged prior invention. *See Juicy Whip*, 292 F.3d at 742 (citation omitted). Without such corroboration the ostensible prior art reference cannot be used to invalidate a patent.

116. For example, in *Juicy Whip*, the patent in suit concerned a “post-mix beverage dispenser” that was designed to look like a “pre-mix beverage dispenser”. 292 F.3d at 732. The Federal Circuit determined that the Defendant’s evidence of public use was insufficient because the proffered witnesses could not definitively say whether the publicly-used dispenser contained a key claim limitation. *Id.* at 729, 738-740. Further, this testimony was insufficiently corroborated when sketches of the alleged earlier dispenser were not made contemporaneously with the reference, *id.* at 743, and a purchase order for one of the components established, at most, the presence of one of that particular component, and not the presence of the other claim limitations, *id.* at 744.

117. Here, similarly, Mr. Ellard was unable to conclusively testify as to whether the ARCO II system was ever put into public use, and he had no personal knowledge of what code was ever installed in the system. Part II.E.3, *supra*. Moreover, his testimony is not corroborated by even a single document regarding actual installation or public use of



the ARCO II system. *Id.* Mr. Ellard's equivocal and uncorroborated recollection of events that took place over thirty years ago is insufficient as a matter of law to establish that the ARCO II system was ever publicly used. *See Juicy Whip*, 292 F.3d at 740-44; *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1373 (Fed. Cir. 1998) ("It is rare indeed that some physical record. . . does not exist."); *Finnigan*, 180 F.3d at 1370 (uncorroborated testimony, even from an uninterested party, is "insufficient as a matter of law").

118. There is also no evidence on the record as to whether the ARCO II system included any "routines" that ran concurrently, or whether the routines it allegedly contained included the pump task means, display and input means, and application task means as claimed in the '282 patent. Part II.E.3, *supra*. Defendants' production of Mr. Ellard's Report and his handwritten source code at most corroborates the witness's testimony that he proposed certain code, but not that the code was ever created or used in public. *See Juicy Whip* at 743 ("The purchase order for clear bowls corroborates the witnesses' testimony that Orange Bang purchased clear bowls from Massaro but still leaves the record devoid of any evidence that the bowls, even if placed upon a post-mix dispenser, created the visual impression that the bowl was the reservoir and principal source from which a serving of the beverage was dispensed.") As in the *Juicy Whip* case, Mr. Ellard's uncorroborated testimony is insufficient as a matter of law to establish the existence of ARCO II as a prior art reference.

119. Furthermore, even if a public use of the ARCO II system could be corroborated, it still would not qualify as "prior art" because the use was "secret." *See In re Smith*, 714 F.2d 1127, 1134 (Fed. Cir. 1983) (to qualify as "public," a use must occur without any "limitation, restriction or injunction of secrecy."). Where, as here, "an asserted

prior use is not that of the applicant, § 102(b) is not a bar when that prior use or knowledge is not available to the public.” *Woodland Trust*, 148 F.3d at 1371 (“third party secret commercial activity, more than one year before the patent application of another, is not a § 102(b) bar.”); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983) (“Neither party contends, and there was no evidence, that the public could learn the claimed process by examining” the product sold.).

120. In particular, the public would not have been able to discern the claimed structure by using the ARCO II gas dispenser. To understand the nature of that system a member of the public would have had to review the source code for the ARCO II system. There is no evidence, and in fact it would strain credulity, that such source code would have been available to the gas-pumping public. Indeed, the source code produced in this case, during Mr. Ellard’s deposition, had a “confidential” designation. Second Stoyanov Decl. Ex. I. The secret nature of the ARCO II system precludes it from being a 102(b) prior art reference.

121. In sum, ARCO II cannot constitute a “public use” prior art reference because neither (1) public use nor (2) the details of its operation can be corroborated, and because the (3) the details of its use were secret. Accordingly it should not be considered for purposes of this ensnarement hearing.

### **3. The Hypothetical Claims Do Not Ensnare the Prior Art Because The Prior Art Lacks Multiple Claim Limitations**

122. The Court concludes that a hypothetical version of claim 1, modified to include two displays, would not ensnare the prior art raised by Defendants in their invalidity report. For the purposes of this analysis, the Court assumes that the references

Defendants assert in their invalidity analysis were equally asserted for the purposes of ensnarement.

***a) The Hypothetical Claims Include Dual Displays, As Well As Task Means That Run Concurrently***

123. Claim 1 of the '282 patent literally requires the presence of a single display. Plaintiffs claim that the Dresser pump infringes literally or, in the alternative, it infringes under the doctrine of equivalents. The “hypothetical” claim 1 incorporates a “dual display” rather than a single display, and the hypothetical claims 2 and 3 depend from claim 1. *See supra*, Part II.D (setting forth the hypothetical claims).

124. The Court must consider whether the hypothetical claim would have been anticipated by, or rendered obvious by, the prior art references identified by Defendants. The ensnarement analysis must be applied to the hypothetical claims as a whole, not just to an individual element of the claim. *Conroy v. Reebok Int'l*, 14 F.3d 1570, 1576-77 (Fed. Cir. 1994) (reversing district court’s finding on ensnarement because court improperly focused on the existence of a single element in the prior art, rather than evaluating the claim as a whole).

125. Although Defendants’ summary judgment motion focused on the “dual-display” limitation, in fact the prior art must disclose all the elements of the hypothetical claim for ensnarement to exist. In *DePuy Spine*, for example, the patentee argued that a product with a conically-shaped element was equivalent to the “spherically-shaped” limitation of the claim, while the accused infringer argued that ensnarement barred the application of the doctrine of equivalents. 567 F.3d at 1320. The Federal Circuit held that ensnarement did not apply because the prior art did not disclose a “compression member”—a claim element entirely unrelated the patentee’s argument that conically-

shaped element was equivalent to a spherically-shaped element. *Id.* at 1325, 1329. Here, too, the prior art must disclose not just dual displays, but also all the other elements of claims 1-3, including the claimed task means that run concurrently.

***b) None Of the Prior Art Patents Asserted By The Defendants, Alone or in Combination, Includes The Three Recited Task Means Running Concurrently, And Accordingly The Hypothetical Claims Do Not Ensnare The Prior Art***

126. Taking Defendants' invalidity contentions as their ensnarement contentions, Defendants contend that four references anticipate the hypothetical claim, and that thus the PTO would not have issued the hypothetical claim with dual displays (while allowing the issued claim with a single display). Those references are the '497 patent (Gentile), the '777 patent (Pearson), the '627 patent (Barker) (incorporating by reference the '100 patent (Wostl)), and the alleged public use of the ARCO II system. Part II.D, *supra*.

127. As stated in the findings of fact, above, none of U.S. Patent No. 3,931,497 (Gentile), U.S. Patent No. 4,107,777 (Pearson), U.S. Patent No. 4,395,627 (Barker), nor the alleged public use of the ARCO II system, disclose: (a) "concurrent operation" of pump, display and input or application tasks; nor (b) the claimed pump task means, the display and input task means, or the application task means. *See* Part II.E-F, *supra*. Accordingly, none of the references anticipate hypothetical claims 1, 2 or 3. *See Applied Material*, 446 F. Supp. 2d at 551 ("[I]nvalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.").

128. Further, none of the references that Defendants assert in combination render the hypothetical claims obvious. Defendants assert obviousness based on (1) the

combination of U.S. Patent No. 3,931,497 (Gentile) with the “public use” of the ARCO II system; (2) the combination of U.S. Patent No. 3,931, 497 (Gentile) in combination with U.S. Patent No.’s. 4,630,754 (Komukai), 4,107,777 (Pearson), and 4,395,627 (Barker); and (3) the combination of U.S. Patent No. 4,395,627 (Barker) in combination with U.S. Patent No. 4,630,754 (Komukai) and the prior art disclosed in U.S. Patent No. 5,027,282.

Part II.D, *supra*. As stated in the findings of fact, above, none of those references disclose “concurrent operation” of pump, display and input or application tasks, nor do they disclose the claimed the pump task means, the display and input task means, or the application task means, as claimed in the hypothetical claims of the ’282 patent. *See* Part II.E-F, *supra*.

Since none of the references disclose these elements individually, they do not disclose them in combination, either. *See Interactive Pictures*, 274 F.3d at 1380-81 (Fed. Cir. 2001) (when individual references did not teach particular claim limitation, that claim limitation was not found in the combination); *Honeywell Int’l v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1145-46 (Fed. Cir. 2004) (substantial evidence existed to support the jury's finding of nonobviousness when none of the prior art references disclosed particular claim limitation.); *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1368 (Fed. Cir. 2004) (substantial evidence supported the jury’s finding of nonobviousness when none of the references disclosed “total homocysteine,” one of the claim elements).<sup>8</sup>

129. Indeed, during prosecution of the ’282 patent, Defendants specifically argued and obtained allowance of the patent on the basis that one of these references—U.S. Patent No. 4,630,754 (Komukai)—did not disclose the “task means running concurrently”

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<sup>8</sup> The same reasoning applies to the new obviousness combinations proposed by Dr. Grimes at his deposition involving the ’777 patent (Pearson), the ’497 patent (Gentile), and the ARCO II system. *See* n. 5 *supra*.

limitation required by the applicable “hypothetical claims.” Since all of the references cited by Defendants, like Komukai, fail to disclose this limitation (among many other missing limitations), Defendants’ ensnarement defense must fail.

130. Accordingly, as a matter of law, the Court finds that none of the asserted references render the hypothetical claims obvious.

### **C. Conclusion**

131. Because none of the prior art references anticipate or render obvious the hypothetical claims, the application of the doctrine of equivalents does not “ensnare” the prior art. Further, Defendants have not met their burden to come forward with prior art, and one of their purported prior art references, the “ARCO II” system, does not qualify as prior art because it was not in “public use.” Accordingly, Touchcom is not precluded from seeking, at trial, to prove infringement under the doctrine of equivalents by the “dual-display” systems.

Dated: November 18, 2010

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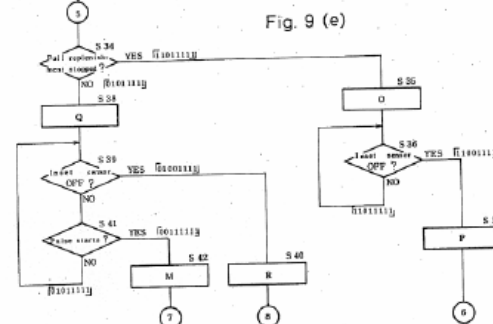
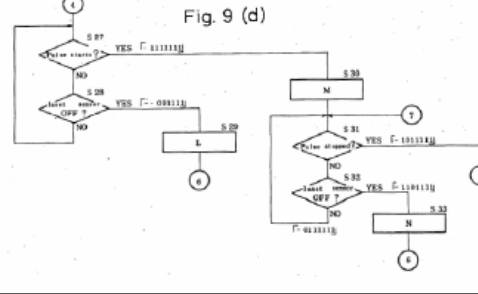
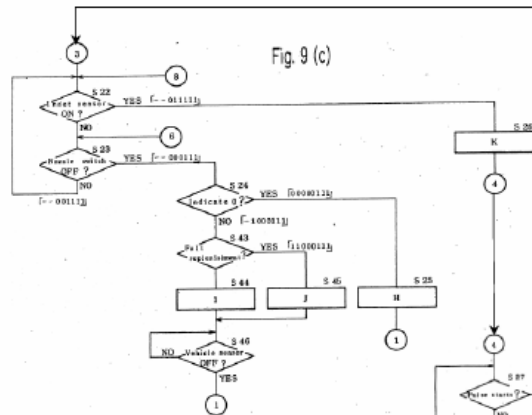
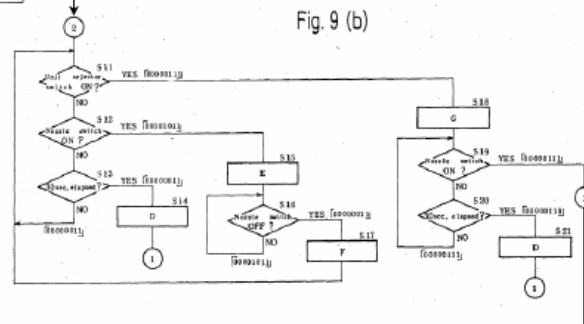
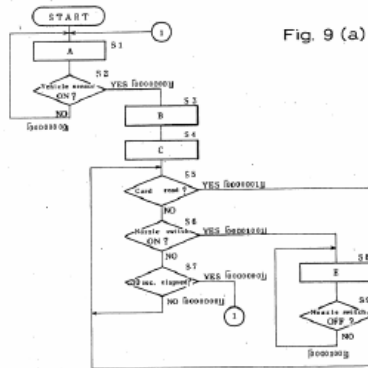
/s/

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## **APPENDIX A**

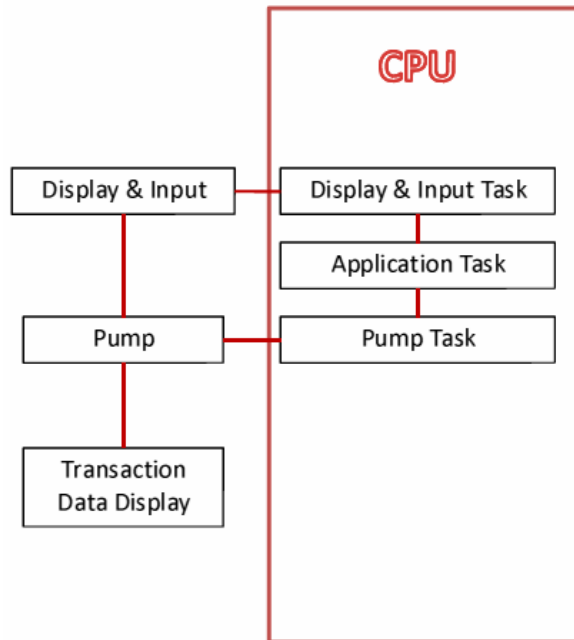
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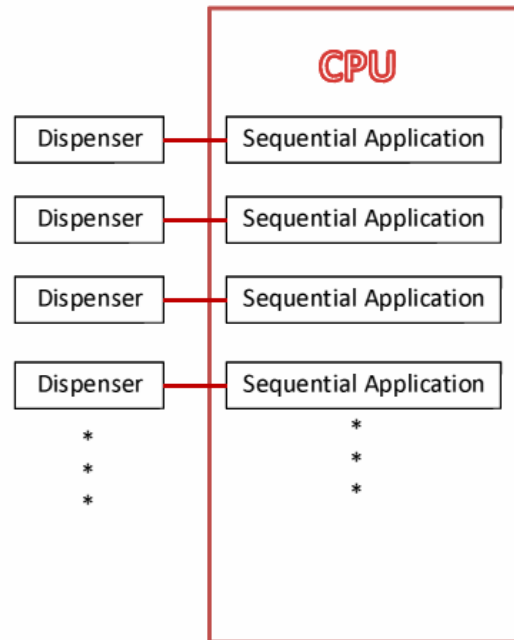


## **APPENDIX B (ARCO II)**

## Hypothetical Claim



## Arco II



NO SEPARATE PUMP, DISPLAY  
AND INPUT AND APPLICATION  
TASKS

**CERTIFICATE OF SERVICE**

I hereby certify that, on this date, November 18, 2010, I will cause the foregoing  
PLAINTIFFS' PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW and  
accompanying declarations and exhibits to be filed electronically with the Clerk of Court using  
the CM/ECF system, which will send a notification of such filing (NEF) to the following:

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